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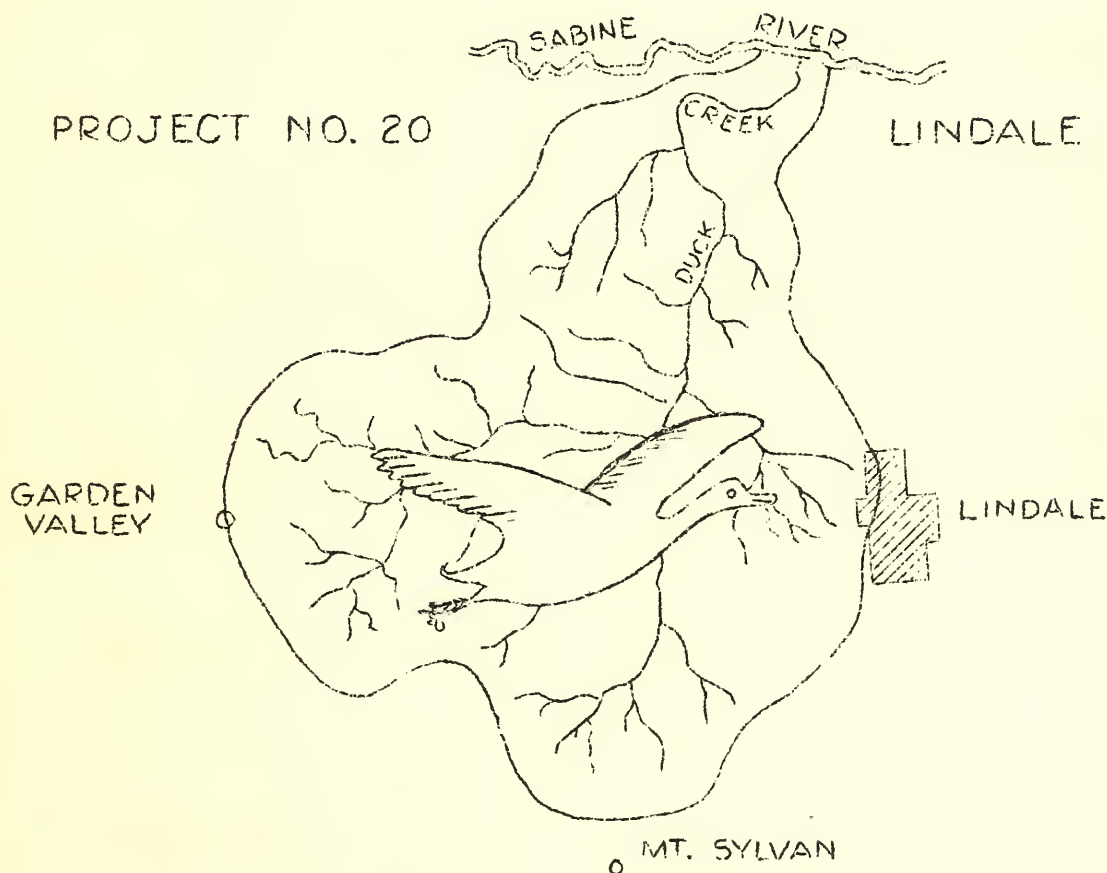
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DUCK CREEK NEWS

UNITED STATES
DEPARTMENT OF THE INTERIOR
SOIL EROSION SERVICE

PROJECT NO. 20

LINDALE TEXAS



JAN 20 1935

DR. WALTON

Farm boy, rural school teacher, county agent, district agent, state agent, Director of the Extension Service, President of the Agricultural and Mechanical College of Texas, --such are some of the steps in the career of Dr. T. O. Walton, Chairman of the Regional Advisory Committee for soil erosion projects in Texas. Past president of the American Association of Land Grant Colleges and for many years a leader in other state and regional agricultural organizations, he is widely known for his sympathetic understanding of the problems of agriculture and farm life. For many years Dr. Walton has been a militant leader in the fight for soil and water conservation in this state, and we are glad to quote his recent statement concerning the work now being done by the Soil Erosion Service.

Says Dr. Walton: "The Department of the Interior, under the leadership of Dr. Bennett, has undertaken in Texas several projects in soil and water conservation on a water-shed basis. One such project is located on Duck Creek in Smith County. The object of the demonstration is to control storm waters and soil erosion for the prevention of depletion of soil fertility and over-flow of the low lands in the area. These demonstrations are upon a comprehensive basis and should, and we believe, will prove to be one of the most constructive emergency enterprises undertaken by the Department of the Interior.

The major portion of material wealth of the Nation comes from the soil; yet in every section of the country soils that were virgin and fertile and therefore highly productive a half to a century or more ago have been depleted of fertility at such a rapid rate that millions of acres are now unprofitable for growing major agricultural crops. A large measure of these losses could have been prevented by proper terracing or the inauguration of other erosion control measures, but this work has been neglected to the great detriment of the farming people.

Comprehensive demonstrations now undertaken in this field constitute a project of primary magnitude and one upon which profits inure to the benefit of the people. We cannot lose when funds are invested in projects of this character.

(Signed) T. O. Walton.

DR. RUSSELL OF ROTHAMSTEAD, ENGLAND, VISITS DUCK CREEK

The erosion control demonstration work being done on various areas in the United States is one of the most important tasks ever undertaken, according to Dr. E. W. Russell of Rothamstead, England, who visited the Duck Creek project January 16. During the past year Dr. Russell has been a research student at Johns Hopkins University at Baltimore, Maryland, studying chemistry and physics of soils. Now he and Mrs. Russell are returning to England to again take up his work at Rothamstead, the oldest agricultural experiment station in the world.

Dr. Russell expressed a great deal of interest in the control of erosion by growing plants, which method is being used extensively on the Duck Creek project. He commented very favorably on the contour furrowing and seeding of permanent pastures, sod-stripping of terrace outlet channels and strip cropping in cultivated fields.

DR. RUSSELL VISITS CONT'D

When informed that the farms of this section have been in cultivation for less than a century, Dr. Russell expressed amazement at the amount of damage which had been done by erosion. He stated that land in England, which has been farmed five hundred to a thousand years, shows hardly any erosion, due to a large extent at least, to the methods of agriculture which have been followed. In England farmers realize a large part of their income from livestock, and put their best land in pasture which improves from year to year and furnishes almost perfect erosion control. Elsewhere in the British Empire, where cultivated crops such as tea are grown extensively, erosion is a major problem which is attracting much attention.

Dr. Russell stated that he hoped he could revisit the Duck Creek project in two years to see the improvement brought about by the work being done here.

REFORESTATION AND GULLY PLANTINGS

Forestry plantings of loblolly pine and black locust have been completed on the farms of O. C. Sharman, Mrs. Mattie G. Shuart, C. C. Kersh and S. S. Copeland. The pine seedlings are being set at six foot intervals and set in the rows in such a manner as to best control erosion. Plantings are being made on different soil types in order to fully determine their value in preventing erosion on badly eroded land.

Black locust seedlings are being planted in gullies that have been previously treated with sod bag dams and had the banks sloped with a turning plow. The trees are being set four to six feet apart, and "zig-zagged" across the gully. Both pines and locusts are being planted with a dibble, a flat ended iron bar which opens the hole into which the tree is set. The soil is then firmed about the roots.

Black locust, in addition to being excellent fence post material and to its value in preventing erosion, is also a legume, and adds fertility to the soil.

FRESNO BUILT TERRACES

On the farm of Mrs. Minnie F. Hall, Buford Hall has shown that terraces can be put up as high and wide and even more economically than can be done with power equipment. The time required, of course, is longer. Using three medium sized mules to a three foot Fresno, a turning plow and a terracing plow, he is demonstrating that in a ten-hour day he can put up two hundred yards of terrace around sixteen inches high and twenty-one feet wide at the base. After rain has settled the present work, he will give it one more plowing, which will increase the width to twenty-four feet and give a settled height of about fourteen inches.

Two recent visitors to the project, Dr. A. B. Conner, Director of the Texas Experiment Stations, and Prof. H. N. Smith of John Tarleton Agricultural College, have completely terraced their farms by the Fresno method. Although new in East Texas, the Fresno promises to open a new avenue for efficient, cheap terrace building by the farmer himself.

SUMMARY OF FIRST 50 COOPERATIVE AGREEMENTS, DUCK CREEK PROJECT

(Note: This summary includes Cooperative Agreements approved before December 25, 1934. Since that time other agreements have been signed, and at this date, (Jan. 20, 1935) thirty-five farmers are on the waiting list to have their farms planned.)

Total acreage in 50 cooperating farms	7217.6
Acres submarginal to be retired from cultivation	569.8
Retired acres to be returned to pasture	531.6
Retired acres to be returned to forest	38.2
Acres to remain in cultivation	3154.5
Acres to be contour farmed, strip cropped and terraced	2026.2
Acres to be contour farmed and terraced	81.8
Acres to be contour farmed and strip cropped	789.0
Acres to be contour farmed only	184.6
Acres to be in 2 year crop rotation	3073.7
Acres to be in pasture	2051.4
Acres of pasture to be contour furrowed	2014.9
Acres of pasture to be seeded	2049.5
Acres to be in timber	1647.4
Acres to be planted to timber	68.7
Acres to receive gully control	3041.7
Acres to receive rodent control	7217.6
Number of fields under old farm plan	1056.0
Number of fields under new farm plan	573.0

LAND USE PERCENTAGES

	<u>Ave. per</u> <u>Farm</u>	<u>Total</u> <u>Acres</u>	<u>Percent</u>
Acres remaining in cultivation	61.8A	3090.3	42.8%
Acres in pasture	41.0A	2051.4	28.4
Acres in woods	33.4A	1673.3	23.2
Acres in farmstead	1.1A	58.5	.81
Acres in meadow	2.0A	102.1	1.44
Acres in orchard	1.3A	85.4	1.18
Acres in berries	1.5A	75.4	1.04
Acres in waste etc.	1.6A	81.2	1.13
	143.70A	7217.6	100.00%

SIXTEEN MONTHS PROGRESS IN EROSION CONTROL

Outlining the development of the soil erosion control program in a report submitted to Secretary of the Interior, Harold L. Ickes, Mr. H. H. Bennett, Director of the Soil Erosion Service, asserted that it now represents the most comprehensive campaign ever undertaken to protect and conserve the nation's most basic natural resource. Land areas totalling 27,300,000 acres in thirty-one states where erosion has been most severe are included in erosion control projects.

"Since its inception sixteen months ago", the Director stated, "the program of the Service has grown from a mere idea into a major effort on the part of the United States to curb the destruction of its land. Through the thirty-two existing projects, which range in size from 25,000 to 16,000,000 acres, the Federal Government is showing thousands of farmers in every section of the country the practicable and sensible way to combat their most vicious enemy, soil erosion."

Within twenty-one of the established project areas, the report stated, approximately 10,000 individual farmers had signed formal cooperative contracts agreeing to carry out, for a period of five years, the erosion control measures recommended by experts of the Service as most adaptable to the needs of their land. These contracts covered an aggregate of approximately 1,500,000 acres. Additional contracts were awaiting completion in those projects which have only recently been set up and which have not yet gotten fully underway, the Director pointed out.

Under these cooperative contracts, far-reaching cropping reforms designed to halt run-off of rainwater and consequent soil loss will be instituted throughout the project areas. In approximate numbers, these crop reforms, under contracts signed up to October 1, include: Strip cropping on 200,000 acres; contour farming on 300,000 acres; planting of thick growing cover crops on 200,000 acres; retirement from cultivation of 125,000 acres and a decrease of 100,000 in the number of acres hitherto planted to clean tilled crops.

In addition, under contracts existing on October 1, the Service had secured agreement on the part of cooperating farmers for the terracing of 225,000 acres, the construction of 70,000 erosion control dams, and the planting of 1,700,000 trees on areas to be retired from cultivation.

Most of the actual labor in connection with the erosion control program is performed by CCC workers under the direction of the Service, the report stated. At the close of the year fifty-one ECW camps were assigned to the Service, with a total of approximately 11,000 men. In addition, 4,129 persons were employed directly by the Service. The monthly payroll for all employees of the Service, exclusive of CCC workers but including their supervisory personnel, was approximately \$500,000.

FROM THE AGRONOMIST'S VIEWPOINT

From the observer's viewpoint the most visible work done by the Soil Erosion Service is the terracing and the pasture contouring work. These two items are important--very important. But, stop to notice the gullies where checks have been put in to give vegetation a chance. Give nature a chance and it will heal wounds more quickly than man with his mechanical means. How about the sod channels for handling terrace outlet water? Don't you think they are practical? You already know that Bermuda grass, once it has a hold, stops erosion. If you will put up the fight with erosion that Bermuda grass does, your farm will be preserved forever. How about crop rotation? Farmers with a good production record have practiced rotation. The farmer needing the most money just now is the one who must buy feed. Rotation and strip crops improve the land, help check erosion and provide feed and food. Elimination of the gophers will save lots of worries. Some reforestation may provide posts, fuel and lumber some day, as well as check erosion. In 1905 Japan assumed control of Manchukuo, a country ruined by erosion. Trees planted then are providing lumber now.

Someone has said, "We learn to do by doing." It might be added that we can learn a great deal by seeing what others are doing. A number of farmers have not only done work on the terraces they are putting in strip crops, but have dressed up their other terraces and are also flat breaking land on the intervals. A description of how to plow is seldom worth anything, but most farmers have had experience building and maintaining terraces with terracing plows. Always plow your terraces in such a way as to be throwing the dirt higher. Flat breaking the intervals now is good practice, not only because the land will take up more moisture and vegetation will be turned under, but it will enable you to get your new rows laid off properly.

Quite a few acres of oats and barley in strips are up and growing. Not only have alternate terraces been stripped but on uniform, moderate slopes strips have been planted alone to prevent erosion. Bad weather isn't hindering the growth of the grain just now, but grazing of the strips by "other peoples'" cattle is doing damage. In muddy weather the stock trample the young grain into the ground, while during dry weather much damage results from pulling the plants out of the ground. After the grain has developed a good root system, light grazing up to about March 1 will not hurt it, but it should be remembered that the primary purpose of the strip crops is erosion control. Notice the difference in the strips on Mr. I. J. Hall's farm, where they have not been grazed, and on other farms where they have

Some contour furrows in pastures have been ruined by hogs, which will necessitate further work by the farmer to repair them. Is the value of "open range" worth the price we pay?

SOILS OF THE DUCK CREEK AREA

In preceding issues of the NEWS we have described Kirvin, Nacogdoches and Bowie soils found in the Duck Creek area. We now take up the Norfolk series, another of our major series.

Norfolk Soils: The Norfolk soils are light gray to gray on the surface with a yellow subsurface color. The topsoil layers are friable or loose and merge below with yellow friable sandy clay or loose very sandy material. The soils and subsoils are readily penetrated by water and both surface and underdrainage are good to excessive. The surface is mostly rolling or undulating and slopes are generally moderate. The fine sand and fine sandy loam are the principal soils of the series. The fine sand occurs in many large and small areas in many sections of the region, where it constitutes an easily recognizable feature. Though these soils are thin and not highly productive they are well suited to melons, sweet potatoes, and other vine crops, and to vegetables, berries and small fruits, where good methods of soil improvement are employed.

The natural vegetative growth is pine or mixed pine and oak, post-oak, blackjack oak, sandjack oak, and occasional bunches of bear grass.

MR. JOHN BOWDOIN COMMENTS

It was a source of real pleasure to every Soil Erosion Service worker when Mr. John Bowdoin voluntarily came before the combined staff meeting the evening of January 17 and expressed his appreciation of the cooperation of the Soil Erosion Service in the work being done on his farm. He stated that while he stayed out of the program for a long time, he was now very glad that he became a cooperator because he saw the value of the work. He thanked the workers for their consideration shown in not damaging fences and other property, also for the small number of trees removed in terracing his orchard. He believes that everyone in the area is coming to see the value of the Soil Erosion Service program.

We appreciate Mr. Bowdoin's commendation!

Mr. Sam Henderson -- "The work already done on our place has increased its value ten dollars per acre."

John Freeman -- "This soil erosion work is the finest thing that ever happened to this country, both for the landlord and the tenant. And I'm not afraid of the Bermuda grass on the slopes, either."

Mr. Joe Ford -- "I think the erosion work is the finest thing that ever happened to East Texas. The gopher control work is just as essential as any other thing that is being done, and it's getting results."

CREDIT WHERE CREDIT IS DUE

To our cooperating farmers, for the wholehearted cooperation which they are giving in the program of soil conservation;

To the CCC boys, for the excellent work they are doing;

To the Relief workers, for the splendid spirit in which they have entered into the soil conservation work.

VISITORS, DECEMBER 20 TO JANUARY 20.

Mr. G. L. Clyburn, County Agent, Cherokee County, and 18 farmers.
Mr. P. G. Haines, State Supervisor of Vocational Education.
Professor E. R. Alexander, Teacher Training Department, A. & M. College, College Station, Texas.
Professor J. C. Dykes, Teacher Training Department, A. & M. College, College Station, Texas.
East Texas Vocational Agriculture teachers visiting the project,
January 5: C. B. Senter, Van, Texas; V. F. Fitzhugh, Tyler, Texas;
I. F. Crocker, Joinerville, Texas; C. T. Sims, Winnsboro, Texas;
L. L. Hale, Henderson, Texas; J. C. Shoultz, Grapeland, Texas;
O. Dawson, Crockett, Texas; H. L. Matthews, Elkhart, Texas; D. B. Pitts, Athens, Texas; J. L. Sowell, Gilmer, Texas; L. P. Allen, Gilmer, Texas;
Henry Ross, Bryan, Texas; L. J. Starr, Hearne, Texas; V. M. Harris, Franklin, Texas; M. P. Tomberlain, Simms, Texas; J. L. Harris, Leona, Texas; F. D. Shackelford, Neches, Texas; Lewis B. Taylor, Wills, Texas;
Ray Epps, Normangeo, Texas; E. R. Neuman, Lufkin, Texas; J. L. Myrick, Mabank, Texas; Wade W. Wills, Edgewood, Texas; R. C. Jackson, Jewett, Texas; R. C. Patterson, Troup, Texas; O. E. King, Bogota, Texas;
J. J. Shaw, Wills Point, Texas; W. C. Royle, Lufkin, Texas; E. D. Bolton, Lindale, Texas; A. B. Emmons, Marshall, Texas; Mr. Riggs, Supt. Kelsey Schools, Upshur County; T. E. England, Donio Texas; R. H. Hampton, Pollok, Texas; W. O. Cox, Tyler, Texas; J. M. Hancock, Whitehouse, Texas.
County Agent Mark Buckingham and Messrs. Hallmark, Whitehead and Reid of Dublin, Texas.
Vocational instructors, C. B. Senter and Elton Roberts of Van, Texas, and 75 students.
Vice-Director W. C. Lowdermilk, Soil Erosion Service, Washington, D. C.
Mr. J. M. Hancock, Vocational Instructor, Whitehouse, Texas, and 38 students.
Mr. L. C. Whitehead, Leader in Rodent Control, Bureau Biological Survey, San Antonio, Texas, and Messrs. Foster and Rainwater of the same organization.
Dr. A. B. Conner, Director of Texas Experiment Stations, College Station, Texas.
Mr. W. T. Carter, Chief of Soils Survey, College Station, Texas.
Mr. A. L. Hafenrichter, Chief Agronomist, Soil Erosion Service, Pullman, Washington.
Mr. G. R. McDole, Chief Soils Expert, Soil Erosion Service, Pullman, Washington.
Messrs. W. E. Dee, Guy Fletcher, H. L. McCall, A. A. Breeden, R. B. Moore, A. V. Osterburger, E. H. Green, T. C. Anderson, and R. W. Granberry from the Soil Erosion Service, Minden and Ruston, Louisiana.
Mr. Wm. C. Boatwright, Soils Expert, Soil Erosion Service, Conway, Arkansas.
Mr. C. L. Orrben, Chief Soils Expert, Soil Erosion Service, Conway, Arkansas.
Mr. G. B. Killinger, Soils Expert, Soil Erosion Service, Mankato, Kansas.

VISITORS CONT'D.

Mr. Elmer Taylor, Agricultural Engineer, Soil Erosion Service, Mankato, Kansas.
Mr. A. S. Robertson, Soils Expert, Soil Erosion Service, LaCrosse, Wisconsin.
Mr. C. C. Hollopeter, Soils Expert, Stillwater Creek Project, Stillwater, Oklahoma.
Mr. Earle C. Douglas, P. O. Box # 11, Tyler, Texas.
Mr. and Mrs. L. H. Lacy, 70 Tokulon Drive, Dallas, Texas.
Mr. E. W. Rice, 30 Cherry Street, Douglaston, Long Island, New York.
Mr. James H. Rice, 30 Cherry Street, Douglaston, Long Island, New York.
Mr. L. B. Scott, Southern Erosion Plant Studies.
Dr. and Mrs. E. W. Russell, Rothamstead Experiment Station, Harpenden, England.
Professor H. N. Smith, Professor of Dairy Husbandry, John Tarleton Agricultural College, Stephenville, Texas.
Professor E. C. Johnson, Professor of Poultry Husbandry, John Tarleton Agricultural College, Stephenville, Texas.
Mr. John H. Smith, Dublin, Texas.
Messrs. Johnny Boughton, Crawford, Willis, and Glenn Kelley, Soil Erosion Service, Minden, Louisiana.

